

**Remarks**

The Office Action mailed January 19, 2005 has been carefully reviewed and the foregoing amendments have been made in consequence thereof.

Claims 1-30 are pending in this application. Claims 1-30 stand rejected.

In accordance with 37 C.F.R. 1.136(a), a one month extension of time is submitted herewith to extend the due date of the response to the Office Action dated January 19, 2005, for the above-identified patent application from April 19, 2005, through and including May 19, 2005. In accordance with 37 C.F.R. 1.17(a)(3), authorization to charge a deposit account in the amount of \$120.00 to cover this extension of time request also is submitted herewith.

The rejection of Claims 1-10 under 35 U.S.C. § 101 as being directed to non-statutory subject matter is respectfully traversed.

The Office Action suggests at page 2 that “the method claims as presented do not claim a technological basis in the pre-amble and the body of the claim.” Accordingly, the Office Action rejects Claims 1-10 as being directed to non-statutory subject matter. Applicants respectfully traverse these suggestions and this rejection. However, Applicants have amended Claim 1 to address the rejection set forth in the Office Action.

More specifically, Applicants submit that the claims of the present patent application are directed to practical applications in the technological arts. “Any sequence of operational steps can constitute a process within the meaning of the Patent Act so long as it is part of the technological arts.” *In re Musgrave*, 431 F.2d 882 (C.C.P.A. 1970). For example, independent Claim 1 is a method for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the portfolio using a computer coupled to a database. Applicants submit that a method for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the portfolio is a useful process that is considered to be within “the technological arts”.

One specific example of such a method implementation is a computer with a processor programmed to at least one of segment the portfolio of assets into at least two valuation portions,

prompt a user to at least one of fully underwrite each asset individually, and group and underwrite a sample of assets included within a first portion of the asset portfolio for computing a value for each asset included within the first portion of the asset portfolio, store in the database asset data including the computed value and descriptive attribute variables for each asset included within the first portion, statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data stored in the database. While the claims are not limited to the specific examples related to a computer with a programmed processor, the claims need not be so restricted to satisfy the requirement of Section 101.

Applicants further traverse the assertion included in the Office Action that Claims 1-10 are directed to non-statutory subject matter under Section 101 in light of the “Examination Guidelines for Computer-Related Inventions”. The Examination Guidelines for Computer-Related Inventions provides in relevant part as follows:

In order to determine whether the claim is limited to a practical application of an abstract idea, Office personnel must analyze the claim as a whole, in light of the specification, to understand what subject matter is being manipulated and how it is being manipulated. During this procedure, Office personnel must evaluate any statements of intended use or field of use, any data gathering step and any post-manipulation activity....Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under § 101. Further, when such a rejection is made, Office personnel must expressly state how the language of the claims has been interpreted to support the rejection.

Applicants respectfully submit that Claim 1 is limited to a practical application in the technological arts. Furthermore, Applicants respectfully submit that the Office Action does not expressly state how the language of Claim 1 supports the Section 101 rejection.

Claim 1 has been amended. Claim 1 recites a “method for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the portfolio using a computer coupled to a database”. Thus, Applicants submit that Claim 1 is directed to a useful process that is considered to be within “the technological arts”. Furthermore, the method includes the step of “at least one of fully underwriting each asset individually, and grouping and underwriting a sample of assets included within a first portion of the asset portfolio for computing a value for each asset included within the first portion of the asset portfolio, the

valuation computation is performed by the computer...storing in the database asset data including the computed value and descriptive attribute variables for each asset included within the first portion...and using the computer to statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data stored in the database, the correlation process including the steps of...identifying at least two descriptive attribute variables for assets included within the second portion of the portfolio for correlating with descriptive attribute variables stored in the database for assets included within the first portion of the portfolio...calculating a value of a response variable for assets included within the second portion based on the asset data assigned to assets included within the first portion having descriptive attribute variables that correlate with the identified descriptive attribute variables...grouping the assets included within the second portion according to the calculated value of a the response variable...and displaying the groupings.” Thus, Claim 1 uses a computer system to perform at least one step of the process. Claim 1 is therefore directed to a practical application in the technological arts.

Dependent Claims 2-10 depend from independent Claim 1, and these dependent Claims are submitted to satisfy the requirements of Section 101 for the same reasons set forth above with respect to independent Claim 1.

For at least the reasons set forth above, Applicants respectfully request that the Section 101 rejection of Claims 1-10 be withdrawn.

The rejection of Claims 1-3, 5-6, 8-9 under 35 U.S.C. § 102(e) as being anticipated by Freeman et al. (U.S. Patent No. 6,249,775) (“Freeman”) is respectfully traversed.

Although the Office Action indicates that “Claims 1-3, 5-6, 8-9 are rejected under 35 U.S.C. 102(e)”, it appears from the arguments of the Office Action that actually Claims 1-3, 5-6, 8-9, 11-13, 15-16, 18-19, 21-23, 25-26 and 28-29 are rejected under 35 U.S.C. 102(e). Accordingly, all of these claims have been addressed hereinbelow as part of the response to the Section 102 rejection.

Applicants respectfully submit that Freeman does not describe or suggest the claimed invention. As discussed below, at least one of the differences between Freeman and the present

invention is the Freeman does not describe or suggest a method for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the portfolio. Rather, Freeman describes a method for mortgage and closed end loan portfolio management in the form of an analytic tool designed to improve analysis of past and future performance of loan portfolios.

More specifically, Freeman does not describe or suggest a method that includes segmenting the portfolio of assets into at least two valuation portions, *at least one of fully underwriting each asset individually, and grouping and underwriting a sample of assets included within a first portion of the asset portfolio for computing a value for each asset included within the first portion of the asset portfolio*, and storing in the database asset data including *the computed value and descriptive attribute variables for each asset included within the first portion*. (Emphasis added.)

Furthermore, Freeman does not describe or suggest *using a computer to statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data stored in the database*. (Emphasis added.)

In addition, Freeman does not describe or suggest a *correlation process* that includes *identifying at least two descriptive attribute variables* for assets included within the second portion of the portfolio for correlating with descriptive attribute variables stored in the database for assets included within the first portion of the portfolio, *calculating a value of a response variable* for assets included within the second portion based on the asset data assigned to assets included within the first portion having descriptive attribute variables that correlate with the identified descriptive attribute variables, and *grouping the assets* included within the second portion according to the calculated value of the response variable. (Emphasis added.)

Freeman describes a method for mortgage and closed end loan portfolio management in the form of an analytic tool designed to improve analysis of past and future performance of loan portfolios. The method includes aggregating loan units into loan vintages, wherein the loans in each vintage originate within a predetermined time interval of one another. The method further includes comparing different vintages to one another in a manner such that the ages of the loans

in the different vintages are comparable to one another. An early warning component of the system predicts delinquency rates expected for a portfolio of loans during a forward looking time window. A matrix link component of the invention combines the loan vintage analysis with the early warning component of the invention and predicts the default rate of the loan portfolios at a selected future point in time. The results of the analysis are graphically depicted and/or automatically feedback to provide "yes" or "no" decisions regarding investments in various loan portfolios (see abstract).

Claim 1 recites a method for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the portfolio using a computer coupled to a database, the method includes “segmenting the portfolio of assets into at least two valuation portions...at least one of fully underwriting each asset individually, and grouping and underwriting a sample of assets included within a first portion of the asset portfolio for computing a value for each asset included within the first portion of the asset portfolio, the valuation computation is performed by the computer...storing in the database asset data including the computed value and descriptive attribute variables for each asset included within the first portion...and using the computer to statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data stored in the database, the correlation process including the steps of...identifying at least two descriptive attribute variables for assets included within the second portion of the portfolio for correlating with descriptive attribute variables stored in the database for assets included within the first portion of the portfolio...calculating a value of a response variable for assets included within the second portion based on the asset data assigned to assets included within the first portion having descriptive attribute variables that correlate with the identified descriptive attribute variables...grouping the assets included within the second portion according to the calculated value of the response variable...and displaying the groupings.”

Freeman does not describe or suggest a method for correlating descriptive attributes of a portfolio of assets for valuation of the assets as recited in Claim 1. More specifically, Freeman does not describe or suggest segmenting the portfolio of assets into at least two valuation portions, *at least one of fully underwriting each asset individually, and grouping and*

*underwriting a sample of assets included within a first portion of the asset portfolio for computing a value for each asset included within the first portion of the asset portfolio, and storing in the database asset data including the computed value and descriptive attribute variables for each asset included within the first portion.* (Emphasis added.)

Moreover, Freeman does not describe or suggest using a computer to *statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data stored in the database.* (Emphasis added.)

In addition, Freeman does not describe or suggest a *correlation process* that includes the steps of *identifying at least two descriptive attribute variables* for assets included within the second portion of the portfolio for correlating with descriptive attribute variables stored in the database for assets included within the first portion of the portfolio, *calculating a value of a response variable* for assets included within the second portion based on the asset data assigned to assets included within the first portion having descriptive attribute variables that correlate with the identified descriptive attribute variables, and *grouping the assets* included within the second portion according to the calculated value of the response variable. (Emphasis added.)

Rather, Freeman describes a method for mortgage and closed end loan portfolio management in the form of an analytic tool designed to improve analysis of past and future performance of loan portfolios.

More specifically, Freeman describes a system wherein for each group of loans of a particular age, the system uses a 3-month transition matrix to forecast three months forward, a 6-month transition matrix to forecast six months forward, a 9-month transition matrix to forecast nine months forward and a 12-month transition matrix to forecast twelve months forward. Based on the data, the system calculates respectively looking forward three, six, nine and twelve months: (1) how many good loans and bad loans will exist from the portfolio; (2) how many good loans will turn into bad; and (3) how many bad loans will remain bad. From this data, one obtains the classic "roll-rate" forecast which provides the first component of the forecast. The above approach merely projects forward the results that have already occurred in the past, on the expectation that they will repeat themselves. However, a greater benefit of the matrix link

technique of the present invention comes from adding the additional information that is contained in and/or obtained by the early warning system (32). (Col. 17, line 52 to Col. 18, line 5).

The system described in Freeman (a) calculates an empirical ratio obtained as – the cumulative number of loans which are 90+ at each quarter (EOP) and divides it by the number of loans that are 90+ at least once during these four quarters; (b) from the EWS (32), the system obtains or forecasts the "bad" rate for the two-year window based on the EWS (32); and (c) using the EWS (32), the system forecasts the bad rate and the empirical ratio above as a new piece of information to adjust the classic "roll-rate" forecast. (Col. 18, lines 6-20).

Notably, Freeman does not describe or suggest segmenting a portfolio of assets into at least two valuation portions, and at least one of fully underwriting each asset individually, and grouping and underwriting a sample of assets included within a first portion of the asset portfolio for computing a value for each asset included within the first portion of the asset portfolio. Moreover, Freeman does not describe or suggest statistically inferring a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data stored in the database.

Freeman also does not describe or suggest a correlation process that includes identifying at least two descriptive attribute variables for assets included within the second portion of the portfolio for correlating with descriptive attribute variables stored in the database for assets included within the first portion of the portfolio, calculating a value of a response variable for assets included within the second portion based on the asset data assigned to assets included within the first portion having descriptive attribute variables that correlate with the identified descriptive attribute variables, and grouping the assets included within the second portion according to the calculated value of the response variable. Accordingly, Applicants respectfully submit that Claim 1 is patentable over Freeman.

For at least the reasons as set forth above, Applicants respectfully request that the 35 U.S.C. § 102(e) rejection of Claim 1 be withdrawn.

Claims 2-3, 5-6 and 8-9 depend from independent Claim 1 which is submitted to be in condition for allowance. When the recitations of Claims 2-3, 5-6 and 8-9 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-3, 5-6 and 8-9 are also patentable over Freeman.

Claim 11 recites a system for correlating descriptive attributes of an asset portfolio for valuation of the assets included within the portfolio, the system includes a computer configured as a server and further configured with a database of asset portfolios and to enable valuation process analytics, and at least one client system connected to the server wherein the server is configured to “segment the portfolio of assets into at least two valuation portions...prompt a user to at least one of fully underwrite each asset individually, and group and underwrite a sample of assets included within a first portion of the asset portfolio for computing a value for each asset included within the first portion of the asset portfolio...store in the database asset data including the computed value and descriptive attribute variables for each asset included within the first portion...statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data stored in the database, the correlation process including the steps of...identifying at least two descriptive attribute variables for assets included within the second portion of the portfolio for correlating with descriptive attribute variables stored in the database for assets included within the first portion of the portfolio...calculating a value of a response variable for assets included within the second portion based on the asset data assigned to assets included within the first portion having descriptive attribute variables that correlate with the identified descriptive attribute variables...grouping the assets included within the second portion according to the calculated value of the response variable...and displaying the groupings.”

Claim 11, as herein amended, recites a system comprising, among other things, a computer configured as a server to perform steps essentially similar to those recited in Claim 1. Thus, it is submitted that Claim 11 is patentable over Freeman for reasons that correspond to those given with respect to Claim 1.

For at least the reasons as set forth above, Applicants respectfully request that the 35 U.S.C. § 102(e) rejection of Claim 11 be withdrawn.



Claims 12-13, 15-16 and 18-19 depend from independent Claim 11 which is submitted to be in condition for allowance. When the recitations of Claims 12-13, 15-16 and 18-19 are considered in combination with the recitations of Claim 11, Applicants submit that dependent Claims 12-13, 15-16 and 18-19 are also patentable over Freeman.

Claim 21 recites a computer for correlating descriptive attributes of an asset portfolio for valuation of the assets included within the portfolio, the computer includes a database of asset portfolios, the computer is programmed to “segment the portfolio of assets into at least two valuation portions...prompt a user to at least one of fully underwrite each asset individually, and group and underwrite a sample of assets included within a first portion of the asset portfolio for computing a value for each asset included within the first portion of the asset portfolio...store in the database asset data including the computed value and descriptive attribute variables for each asset included within the first portion...and statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data stored in the database, the correlation process including the steps of...identifying at least two descriptive attribute variables for assets included within the second portion of the portfolio for correlating with descriptive attribute variables stored in the database for assets included within the first portion of the portfolio...calculating a value of a response variable for assets included within the second portion based on the asset data assigned to assets included within the first portion having descriptive attribute variables that correlate with the identified descriptive attribute variables...grouping the assets included within the second portion according to the calculated value of the response variable...and displaying the groupings.”

Claim 21, as herein amended, recites a computer programmed to perform steps essentially similar to those recited in Claim 1. Thus, it is submitted that Claim 21 is patentable over Freeman for reasons that correspond to those given with respect to Claim 1.

For at least the reasons as set forth above, Applicants respectfully request that the 35 U.S.C. § 102(e) rejection of Claim 21 be withdrawn.

Claims 22-23, 25-26 and 28-29 depend from independent Claim 21 which is submitted to be in condition for allowance. When the recitations of Claims 22-23, 25-26 and 28-29 are

considered in combination with the recitations of Claim 21, Applicants submit that dependent Claims 22-23, 25-26 and 28-29 are also patentable over Freeman.

For at least the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1-3, 5-6, 8-9, 11-13, 15-16, 18-19, 21-23, 25-26 and 28-29 be withdrawn.

The rejection of Claims 4, 7 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Freeman et al. (U.S. Patent No. 6,249,775) ("Freeman") is respectfully traversed.

Although the Office Action indicates that "Claims 4, 7, 10 are rejected under 35 U.S.C. 103(a)", it appears from the arguments of the Office Action that actually Claims 4, 7, 10, 14, 17, 20, 24, 27 and 30 are rejected under 35 U.S.C. 103(a). Accordingly, all of these claims have been addressed hereinbelow as part of the response to the Section 103 rejection.

Freeman is described above. According to the Office Action, the Examiner has taken Official Notice that the expressions recited in Claims 4, 7, 14, 17, 24 and 27 are simply "the calculation of an average value" or "a probabilistic average" and that calculating such values in a statistical portfolio analysis is an old and well known practice in the art. The Examiner also takes Official Notice of the use of three dimensional visualizations in depicting characteristics of a portfolio analysis as being well known in the art. Applicants traverse the Official Notices taken.

Applicants submit that Claims 4, 7 and 10 have been amended. Claims 4, 7 and 10 depend from independent Claim 1. Claim 1 is recited above. For at least the reasons set forth above, Applicants submit that Claim 1 is patentable over Freeman. Accordingly, when the recitations of Claims 4, 7 and 10 are considered in combination with the recitations of Claim 1, Applicants respectfully submit that dependent Claims 4, 7 and 10 are also patentable over Freeman.

Applicants also submit that Claims 14, 17 and 20 have been amended. Claims 14, 17 and 20 depend from independent Claim 11. Claim 11 is recited above. For at least the reasons set forth above, Applicants submit that Claim 11 is patentable over Freeman. Accordingly, when the recitations of Claims 14, 17 and 20 are considered in combination with the recitations of

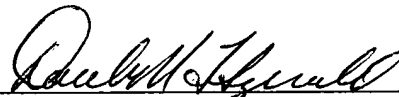
Claim 12, Applicants respectfully submit that dependent Claims 14, 17 and 20 are also patentable over Freeman.

Applicants further submit that Claims 24, 27 and 30 have been amended. Claims 24, 27 and 30 depend from independent Claim 21. Claim 21 is recited above. For at least the reasons set forth above, Applicants submit that Claim 21 is patentable over Freeman. Accordingly, when the recitations of Claims 24, 27 and 30 are considered in combination with the recitations of Claim 21, Applicants respectfully submit that dependent Claims 24, 27 and 30 are also patentable over Freeman.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 4, 7, 10, 14, 17, 20, 24, 27 and 30 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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